

Astronomische Nachrichten

Expedition auf der Königlichen Sternwarte bei Kiel.

Herausgeber: Prof. Dr. C. A. F. Peters.

Bd. 86.

No. 2046—48.

6, 7 und 8.

Beobachtungen von Planeten und Cometen, angestellt auf der Hamburger Sternwarte.

A. Beobachtungen am Aequatoreal.

(114) Cassandra.

(114) *Cassandra*.

| | | Planet — • | | | | | | | | | |
|-----------|---|-------------------------------------|----------------|---|--------------------|---------------|----------|--------------|------------|------------|--|
| 1872 | M. Hamb. Zt. | $\Delta\alpha$ | $\Delta\delta$ | α app. | L. f. p. | δ app. | L. f. p. | Zahl d. Vgl. | Vgl.-Stern | Beobachter | |
| October 1 | 13 ^h 34 ^m 29 ^s | +0 ^m 57 ^s .20 | +2' 37''9 | 3 ^h 8 ^m 54 ^s .45 | 8.892 _n | +12° 0' 10''3 | 0.770 | 8.2 | 1 | P | |
| 6 | 12 12 45 | —0 52.25 | —8 28.9 | 3 6 47.70 | 9.220 _n | +11 39 17.2 | 0.793 | 20.5 | 2 | " | |

Mittlere Oerter der Vergleichsterne für 1872.0.

| | α | δ | |
|---|---|----------------|---|
| 1 | 3 ^h 7 ^m 54 ^s .86 | +11° 57' 17''8 | Hamburger Meridian-Beobachtungen Nr. 22 |
| 2 | 3 7 37.45 | 11 47 31.2 | Schjell. 921 |

1873

(62) Erato.

| | | | | | | | | | | |
|----------|---------|----------|---------|-----------|--------------------|-------------|-------|------|---|---|
| Januar 8 | 9 40 23 | —0 29.23 | +3 39.5 | 7 28 5.98 | 9.369 _n | +20 58 55.4 | 0.711 | 18.6 | 1 | " |
| 31 | 8 11 31 | +0 29.19 | +1 45.6 | 7 8 23.55 | 9.316 _n | 21 51 46.9 | 0.693 | 23.5 | 2 | " |

Mittlere Oerter der Vergleichsterne für 1873.0.

| | | | |
|---|------------|-------------|--|
| 1 | 7 28 34.64 | +20 55 13.2 | Leipziger Meridian-Beobachtungen Astr. Nachr. 2004 |
| 2 | 7 7 53.66 | 21 49 58.0 | B. B. +21° 1533 |

(116) Sirona.

| | | | | | | | | | | |
|---|----------|----------|---------|------------|-------|-------------|-------|------|---|---|
| 8 | 10 56 59 | +0 31.03 | —1 42.6 | 5 46 36.97 | 8.621 | +26 21 52.5 | 0.605 | 15.5 | 1 | " |
|---|----------|----------|---------|------------|-------|-------------|-------|------|---|---|

Mittlerer Ort des Vergleichsterns für 1873.0.

| | | | |
|---|-----------|-------------|--|
| 1 | 5 46 5.49 | +26 23 30.5 | Berliner Meridian-Beobachtungen Astr. Nachr. 2008. |
|---|-----------|-------------|--|

(58) Concordia.

| | | | | | | | | | | |
|------------|----------|----------|---------|------------|--------------------|------------|-------|------|---|---|
| Januar 25 | 13 43 19 | +0 27.71 | +3 57.9 | 9 58 55.78 | 7.969 | + 9 10 7.8 | 0.788 | 15.5 | 1 | " |
| 31 | 11 30 35 | +1 47.39 | —3 30.4 | 9 54 39.80 | 9.082 _n | 9 51 53.2 | 0.788 | 24.5 | 2 | " |
| Februar 20 | 11 36 43 | —0 52.25 | +5 16.9 | 9 37 57.96 | 7.580 | 11 57 16.7 | 0.767 | 19.5 | 3 | " |

Mittlere Oerter der Vergleichsterne für 1873.0.

| | | | |
|---|------------|-------------|---|
| 1 | 9 58 27.45 | + 9 16 10.4 | Hamburger Meridian-Beobachtungen Nr. 50 |
| 2 | 9 52 51.67 | 9 55 24.6 | " " " 49 |
| 3 | 9 38 49.26 | 11 52 1.5 | " " " 48 |

(61) Danae.

| | | | | | | | | | | |
|------------|----------|----------|---------|------------|--------------------|------------|-------|------|---|---|
| Februar 20 | 10 21 53 | +3 56.04 | —3 50.0 | 9 18 25.77 | 8.940 _n | +22 26 4.2 | 0.661 | 20.5 | 1 | " |
|------------|----------|----------|---------|------------|--------------------|------------|-------|------|---|---|

Mittlerer Ort des Vergleichsterns für 1873.0.

| | | | |
|---|------------|-------------|---|
| 1 | 9 14 28.70 | +22 29 54.1 | Hamburger Meridian-Beobachtungen Nr. 46 |
|---|------------|-------------|---|

(57) Mnemosyne.

| | | | | | | | | | | |
|---------|---------|---------|---------|-------------|--------------------|------------|-------|------|---|---|
| März 30 | 8 44 23 | —0 3.65 | +6 59.5 | 10 46 19.45 | 9.124 _n | — 3 7 37.9 | 0.966 | 24.6 | 1 | " |
|---------|---------|---------|---------|-------------|--------------------|------------|-------|------|---|---|

Mittlerer Ort des Vergleichsterns für 1873.0.

| | | | |
|---|-------------|-------------|---|
| 1 | 10 46 22.16 | — 3 14 31.5 | Hamburger Meridian-Beobachtungen Nr. 51 |
|---|-------------|-------------|---|

(122) Gerda.

| (122) Saturn | | | | | | | | | | Zahl Vgl.- Beob- | | |
|--------------|----|---|------------------------------------|----------------|--|--------------------|---------------|----------|---------|------------------|--------|--|
| 1873 | | M. Hamb. Zt. | Planet — * | | α app. | L. f. p. | δ app. | L. f. p. | d. Vgl. | Stern | achter | |
| October | 16 | 12 ^h 25 ^m 26 ^s | $\Delta\alpha$ | $\Delta\delta$ | | | | | | | | |
| | 16 | 12 ^h 25 ^m 26 ^s | —1 ^m 7 ^s .18 | +0' 46''3 | 2 ^h 11 ^m 46 ^s .30 | 7.807 _n | +11°58' 35''5 | 0.766 | 36.9 | 1 | R | |
| | 17 | 10 51 6 | —1 47.68 | —2 59.2 | 2 11 5.81 | 9.156 _n | 11 54 50.0 | 0.774 | 28.7 | " | " | |
| | 19 | 10 22 38 | +0 0.43 | —1 41.5 | 2 9 38.97 | 9.231 _n | 11 46 22.6 | 0.777 | 14.6 | 2 | " | |
| | 20 | 11 47 58 | —0 46.75 | —6 5.4 | 2 8 51.80 | 8.556 _n | 11 41 58.7 | 0.769 | 24.6 | " | " | |
| | 22 | 11 11 53 | —0 49.04 | —5 32.7 | 2 7 23.64 | 8.889 _n | 11 33 27.1 | 0.772 | 20.4 | 3 | " | |
| | 27 | 12 10 45 | —1 6.93 | —5 46.6 | 2 3 37.16 | 8.707 | 11 11 41.9 | 0.774 | 24.6 | 4 | " | |
| Novbr. | 9 | 11 42 32 | —0 8.71 | +4 22.6 | 1 54 18.55 | 9.235 | 10 18 10.8 | 0.789 | 17.6 | 5 | " | |
| | 11 | 13 43 52 | +1 9.99 | —0 22.1 | 1 52 56.47 | 9.430 | 10 10 23.1 | 0.804 | 16.4 | 6 | " | |
| | 12 | 10 54 37 | +0 36.75 | —3 42.9 | 1 52 23.23 | 8.678 | +10 7 2.3 | 0.782 | 19.6 | 6 | " | |

Mittlere Oerter der Vergleichsterne für 1873.0.

| | α | δ | | |
|---|--|---------------|--|------------|
| 1 | 2 ^h 12 ^m 50 ^s .57 | +11°57' 29''8 | Berl. Merid.-Beob. | A. N. 2007 |
| 2 | 2 9 35.60 | 11 47 44.5 | " | " |
| 3 | 2 8 9.70 | 11 38 40.1 | Hamb. Merid.-Beob. | Nr. 11 |
| 4 | 2 4 41.07 | 11 17 8.6 | " | " 10 |
| 5 | 1 54 24.21 | 10 13 28.2 | Berl. Merid.-Beob. (briefl. Mittheilung des Herrn Dr. Knorre) und H. M.-B. Nr. 6 | |
| 6 | 1 51 43.42 | 10 10 24.9 | " | A. N. 2007 |

Bemerkungen. Der Planet erschien am 16. October etwa 11.3 Grösse, bei der letzten Beobachtung, November 12, war er kaum 12.5 Grösse.

(53) Calypso.

| | | | | | | | | | | |
|------------|----------|----------|---------|------------|--------------------|-------------|-------|------|---|---|
| October 17 | 13 9 38 | +0 54.60 | +7 4.0 | 1 11 33.99 | 9.189 | — 0 14 52.2 | 0.852 | 24.6 | 1 | R |
| 18 | 9 0 11 | +0 13.30 | +1 50.9 | 1 10 52.69 | 9.307 _n | 0 20 5.3 | 0.852 | 23.6 | " | " |
| 19 | 10 59 45 | —0 41.81 | —4 46.3 | 1 9 57.59 | 8.340 _n | 0 26 42.5 | 0.853 | 24.6 | " | " |
| 20 | 12 19 31 | +1 0.46 | —2 15.5 | 1 9 4.73 | 9.014 | 0 33 12.6 | 0.853 | 24.6 | 2 | " |
| 27 | 11 25 57 | —1 51.36 | —4 16.2 | 1 3 33.37 | 8.862 | — 1 11 14.2 | 0.857 | 16.4 | 3 | " |

Mittlere Oerter der Vergleichsterne für 1873.0.

| | | | | |
|---|------------|-------------|--|------|
| 1 | 1 10 36.50 | — 0 22 15.8 | Berliner Meridian-Beobachtungen Astr. Nachr. | 2007 |
| 2 | 1 8 1.37 | — 0 31 16.7 | " | " |
| 3 | 1 5 21.77 | — 1 7 17.2 | Copeland und Börgen Nr. 254. Schjell. 386 | " |

Bemerkungen. October 17: Der Planet erschien etwa 10^m9 hell.

(82) Alcmene.

| | | | | | | | | | | |
|------------|----------|----------|---------|------------|-------|-------------|-------|------|---|---|
| October 20 | 15 11 51 | +3 5.13 | —2 16.8 | 2 45 20.59 | 9.337 | +16 54 6.1 | 0.744 | 20.5 | 1 | R |
| 27 | 14 22 16 | +0 28.38 | +5 1.0 | 2 39 10.91 | 9.291 | 16 34 20.2 | 0.742 | 23.6 | 2 | " |
| 29 | 9 3 23 | —1 10.39 | —0 34.0 | 2 37 32.16 | 9.416 | 16 28 45.4 | 0.759 | 16.4 | " | " |
| " | 10 25 53 | —1 13.84 | —0 38.0 | 2 37 28.71 | 9.183 | 16 28 41.4 | 0.735 | 15.4 | " | " |
| Novbr. 9 | 13 50 2 | —0 2.36 | | 2 26 52.25 | 9.371 | | | 32.6 | 3 | " |
| " | 13 55 4 | | —6 35.2 | | | 15 50 45.0 | 0.759 | 6 | " | " |
| 10 | 14 44 12 | —1 0.62 | —10 5.5 | 2 25 53.99 | 9.475 | 15 47 14.7 | 0.778 | 24.6 | " | " |
| 12 | 12 37 41 | +3 14.99 | +6 50.8 | 2 24 6.55 | 9.197 | 15 40 22.0 | 0.744 | 24.6 | 4 | " |
| 13 | 12 2 32 | +2 21.82 | +3 24.5 | 2 23 13.38 | 9.051 | 15 36 55.7 | 0.738 | 24.6 | " | " |
| 14 | 12 42 48 | +1 26.35 | —0 6.5 | 2 22 17.92 | 9.251 | +15 33 24.8 | 0.748 | 24.6 | " | " |

Mittlere Oerter der Vergleichsterne für 1873.0.

| | | | | |
|---|------------|-------------|---|----|
| 1 | 2 42 12.45 | +16 56 4.3 | New 7 Years Catalog | |
| 2 | 2 38 39.44 | +16 28 59.7 | Berl. Merid.-Beob. (briefl. Mittheil. des Herrn Dr. Knorre) und H. M.-B. Nr. 17 | |
| 3 | 2 26 51.42 | +15 57 0.2 | " | 14 |
| 4 | 2 20 48.37 | +15 33 11.0 | " | 12 |

Bemerkungen. October 20: Der Planet erschien etwa 11.4 Grösse.

(24) Themis.

| | | Planet — * | | | | | | | | | | | | | | | |
|---------|---|------------------------------------|----------------|---|----------|----------------|----------|--------------------------|------------------|-------|--|--|--|--|--|--|--|
| 1873 | M. Hamb. Zt. | $\Delta\alpha$ | $\Delta\delta$ | α app. | L. f. p. | δ app. | L. f. p. | Zahl d. Vgl. Sternachter | Vgl. Sternachter | Beob. | | | | | | | |
| October | 20 14 ^h 0 ^m 49 ^s | +0 ^m 11 ^s 06 | +1' 5'' 5 | 2 ^h 46 ^m 28 ^s 20 | 9.057 | +16° 8' 45'' 4 | 0.734 | 19.6 | 1 | R | | | | | | | |
| | 27 14 58 41 | +0 31 61 | —2 2.3 | 2 41 3.34 | 9.379 | 15 45 42.1 | 0.759 | 26.7 | 2 | " | | | | | | | |
| | 29 12 54 22 | +2 40 60 | +4 51.0 | 2 39 31.28 | 8.883 | 15 39 7.0 | 0.735 | 24.6 | 3 | " | | | | | | | |
| Novbr. | 9 13 27 48 | +3 58 68 | —2 22.6 | 2 30 35.65 | 9.303 | 14 59 24.2 | 0.757 | 20.5 | 4 | " | | | | | | | |
| | 10 13 51 51 | +3 10 50 | —6 1.5 | 2 29 47.48 | 9.376 | 14 55 45.4 | 0.765 | 20.5 | " | " | | | | | | | |
| | 11 14 23 36 | +0 57 29 | +1 51.8 | 2 28 58.61 | 9.444 | 14 52 5.2 | 0.777 | 24.6 | 5 | " | | | | | | | |
| | 12 11 33 58 | +0 16 27 | —1 19.4 | 2 28 17.60 | 8.733 | +14 48 54.0 | 0.742 | 16.6 | " | " | | | | | | | |

α δ Mittlere Oerter der Vergleichsterne für 1873.0.

| | | | |
|---|---|----------------|---|
| 1 | 2 ^h 46 ^m 14 ^s 14 | +16° 7' 21'' 5 | Berl. Merid.-Beob. Astr. Nachr. 2007 |
| 2 | 2 40 28.65 | 15 47 25.4 | Hamb. " Nr. 18 |
| 3 | 2 36 50.68 | 15 34 16.0 | Berl. " Astr. Nachr. 2007 und Hamb. Meridian-Beobachtungen Nr. 16 |
| 4 | 2 26 33.79 | 15 1 26.9 | " (briefl. Mittheil. des Herrn Dr. Knorre) und H. M.-B. Nr. 13 |
| 5 | 2 27 58.13 | +14 49 53.5 | Hamb. " Nr. 15 |

(94) Aurora.

| | | | | | | | | | | |
|---------|-------------|----------|---------|------------|--------------------|-------------|-------|------|---|---|
| October | 29 8 15 36 | —3 32.09 | +0 50.9 | 2 56 53.72 | 9.535 _n | +25 5 0.5 | 0.730 | 28.7 | 1 | R |
| Novbr. | 9 14 42 35 | +3 46.90 | +0 40.2 | 2 46 40.49 | 9.461 | 24 49 20.4 | 0.696 | 20.5 | 2 | " |
| | 10 15 46 14 | +2 50.20 | —1 23.8 | 2 45 43.80 | 9.547 | 24 47 16.5 | 0.742 | 24.5 | " | " |
| | 11 14 51 33 | +1 57.57 | —3 26.7 | 2 44 51.18 | 9.488 | 24 45 13.7 | 0.708 | 23.4 | " | " |
| | 12 13 19 48 | +2 34.33 | +3 24.3 | 2 44 0.69 | 9.301 | 24 43 7.8 | 0.634 | 24.6 | 3 | " |
| | 13 12 47 9 | +1 41.92 | +1 11.2 | 2 43 8.28 | 9.200 | 24 40 54.8 | 0.647 | 22.6 | " | " |
| | 14 13 10 44 | +0 48.80 | —1 9.9 | 2 42 15.17 | 9.303 | +24 38 33.8 | 0.659 | 23.6 | " | " |

Mittlere Oerter der Vergleichsterne für 1873.0.

| | | | |
|---|------------|------------|---|
| 1 | 3 0 22.56 | +25 3 51.9 | Hamburger Meridian-Beobachtungen Nr. 20 |
| 2 | 2 42 50.25 | 24 48 20.6 | Leipziger " A. N. 2004 |
| 3 | 2 41 23.01 | 24 39 23.6 | New seven Years Catalog. |

Bemerkungen. November 9: Der Planet war 10^m2 hell.

(103) Hera.

| | | | | | | | | | | | | | | | | | | | |
|--------|----|----|----|----|----|-------|----|------|---|----|-------|-------|-----|----|------|-------|------|---|---|
| 1873 | | | | | | | | | | | | | | | | | | | |
| Novbr. | 14 | 13 | 59 | 1 | —0 | 16.80 | —3 | 27.7 | 4 | 23 | 14.93 | 9.051 | +13 | 23 | 33.7 | 0.759 | 16.4 | 1 | R |
| | 14 | 14 | 44 | 55 | —0 | 18.48 | —3 | 33.3 | 4 | 23 | 13.25 | 9.252 | 13 | 23 | 28.1 | 0.766 | 12.3 | 1 | " |

Mittlerer Ort des Vergleichsterns für 1873.0.

| | | | |
|---|------------|-------------|--------------------------|
| 1 | 4 23 28.39 | +13 26 45.6 | New seven Years Catalog. |
|---|------------|-------------|--------------------------|

(118) Peitho.

| | | | | | | | | | | | | | | | | | | | | |
|--------|---|----|----|----|----|-------|----|------|---|----|-------|--------------------|---|---|----|------|-------|------|---|---|
| Novbr. | 7 | 11 | 38 | 41 | +0 | 53.22 | +2 | 41.2 | 1 | 59 | 14.98 | 8.863 | + | 9 | 33 | 43.2 | 0.788 | 22.6 | 1 | R |
| | 8 | 8 | 49 | 34 | —0 | 21.83 | +5 | 16.6 | 1 | 58 | 22.88 | 9.242 _n | | 9 | 33 | 57.4 | 0.794 | 29.7 | 2 | " |

Mittlere Oerter der Vergleichsterne für 1874.0.

| | | | |
|---|------------|------------|--|
| 1 | 1 58 18.40 | +9 30 39.4 | Hamburger Meridian-Beobachtungen Nr. 7 |
| 2 | 1 58 41.32 | 9 28 18.1 | " " " 8 |

(139)

| | | | | | | | | | | |
|--------|-----------|----------|---------|------------|--------------------|------------|-------|------|---|---|
| Novbr. | 8 9 33 56 | +0 42.96 | —3 30.9 | 1 44 59.41 | 8.958 _n | +5 44 16.8 | 0.816 | 24.5 | 1 | R |
|--------|-----------|----------|---------|------------|--------------------|------------|-------|------|---|---|

Mittlerer Ort des Vergleichsterns für 1874.0.

| | | | |
|---|------------|------------|--|
| 1 | 1 44 13.14 | +5 47 25.4 | Hamburger Meridian-Beobachtungen Nr. 4 |
|---|------------|------------|--|

Bemerkungen. Luft sehr unrein. Planet etwa 11^m4 hell.

Comet a, 1873 (Tempel).

| | | | | | | | | | | | | | | | | | | | |
|------|-------------------------------------|----|----|----|----|-------|-----|------|----|----|-------|--------------------|-----|----|------|-------|------|---|---|
| 1873 | Sonne, Mond, Planeten (Mittelwerte) | | | | | | | | | | | | | | | | | | |
| Mai | 16 | 12 | 3 | 3 | —0 | 29.45 | —9 | 8.0 | 16 | 33 | 21.56 | 8.908 _n | —15 | 15 | 40.5 | 0.913 | 21.5 | 1 | P |
| | 28 | 12 | 38 | 42 | +2 | 0.32 | +11 | 12.1 | 16 | 26 | 21.10 | 8.790 | 17 | 15 | 9.9 | 0.920 | 10.4 | 2 | R |
| Juni | 2 | 12 | 47 | 2 | +3 | 31.22 | +2 | 15.4 | 16 | 23 | 12.90 | 9.045 | —18 | 7 | 51.4 | 0.919 | 11.4 | 3 | " |

Mittlere Oerter der Vergleichsterne für 1873.0.

| | α | δ | |
|---|---|----------------|---|
| 1 | 16 ^h 33 ^m 49 ^s .42 | —15° 6' 23'' 6 | Weisse I 16 ^b 624 |
| 2 | 16 24 19.01 | —17 26 13.0 | Berliner Meridian-Beobachtungen Astr. Nachr. 2008 |
| 3 | 16 19 39.85 | —18 9 57.7 | New seven Years Catalog. |

Bemerkungen. Mai 16: Comet schwach mit merklicher Verdichtung.

Mai 28: Der Comet sehr schwach, klein und in der Mitte etwas verdichtet. Ein Stern 12^m, welcher beiläufig 50'' nördlich 0^s.5 voraufging, stürzte sehr.

Juni 2: Mond im Untergehen, helle Dämmerung, Comet sehr schwach.

Comet b, 1873 (Tempel).

| 1873 | Mt. | Hamb. | Zt. | $\Delta\alpha$ | $\Delta\delta$ | α app. | L. f. p. | δ app. | L. f. p. | Zahl d. Vgl. | Vgl.-Beob. | Stern | acht |
|---------|-----|---|-----|-------------------------------------|----------------|--|--------------------|----------------------------|----------|--------------|------------|-------|------|
| August | 17 | 14 ^h 19 ^m 31 ^s | | +0 ^m 58 ^s .40 | | 1 ^h 44 ^m 21 ^s .15 | 9.176 _n | | | 11 | 1 | P | |
| | 17 | 14 20 48 | | | — 8' 30'' 2 | | | —11 ^m 27' 4'' 8 | 0.987 | 4 | " | " | |
| | 28 | 14 21 14 | | —1 42.48 | + 4 51.6 | 1 52 14.56 | 8.984 _n | —14 4 32.9 | 0.909 | 19.5 | 2 | " | |
| Septbr. | 18 | 13 27 55 | | —1 34.43 | + 5 59.3 | 1 49 12.05 | 8.674 _n | —18 31 8.6 | 0.923 | 23.8 | 3 | R | |
| | 19 | 13 4 11 | | +0 33.97 | + 1 25 1 | 1 48 34.53 | 8.891 _n | —18 40 50.8 | 0.922 | 20.6 | 4 | " | |
| | 25 | 11 57 29 | | +0 26.50 | + 3 23.4 | 1 44 7.90 | 8.838 _n | —19 30 20.3 | 0.925 | 20.8 | 5 | " | |
| | 26 | 12 16 49 | | —0 21.88 | — 3 6.9 | 1 43 19.54 | 9.006 _n | —19 36 50.6 | 0.923 | 16.6 | " | " | |
| | 27 | 12 25 23 | | —0 59.20 | — 4 26.2 | 1 42 29 24 | 8.906 _n | —19 42 48.8 | 0.925 | 23.6 | 6 | " | |
| | 29 | 12 28 15 | | +4 13.54 | + 4 50.6 | 1 40 42.36 | 8.782 _n | —19 55 19.8 | 0.926 | 22.5 | 7 | " | |

Mittlere Oerter der Vergleichsterne für 1873.0.

| | | | |
|---|------------|-------------|---|
| 1 | 1 43 20.92 | —11 18 54.3 | New seven Years Catalog |
| 2 | 1 53 54.98 | —14 19 46.0 | Hamburger Meridian-Beobachtungen Nr. 5 |
| 3 | 1 50 43.89 | —18 37 30.2 | Argelander-Oeltzen 1181 |
| 4 | 1 47 57.94 | —18 42 38.1 | Leipziger Meridian-Beobachtungen Astr. Nachr. 2004 |
| 5 | 1 43 38.65 | —19 34 5.5 | Argelander-Oeltzen 1105 |
| 6 | 1 43 25.66 | —19 38 44.2 | Berliner Merid.-Beob. Astr. Nachr. 2007 und Leipziger Merid.-Beob. A. N. 2004 |
| 7 | 1 36 25.96 | —20 0 31.6 | Argelander-Oeltzen 1014 |

Bemerkungen. August 17: Comet schwach und in Folge verschiedener schwach aufleuchtender Verdichtungsstellen schwer aufzufassen, er zeigte einen kurzen, nach N.-O. gerichteten Schweifansatz.

September 18: Luft stürmisch, heftiges Wetterleuchten. Comet sehr blass, etwa 1½' im Durchmesser, mit schwacher centraler Verdichtung.

" 25: Sehr heitere Luft, der Comet etwas heller, als an den beiden vorhergehenden Abenden, länglich in der Richtung des Parallels gestreckt, mit schwacher Verdichtung.

" 29: Der Comet, obschon sehr lichtschwach, zeigt eine merkliche centrale Verdichtung, die Position in Declination weniger zuverlässig, als in AR.

Comet c, 1873 (Borrelly).

| | | | | | | | | | | | |
|--------|----|----------|----------|----------|------------|--------------------|-------------|-------|------|---|---|
| August | 22 | 13 46 29 | —4 45.94 | — 5 44.7 | 7 29 37.00 | 9.606 _n | +36 48 33.4 | 0.840 | 11.3 | 1 | P |
| | 27 | 13 45 34 | —3 45.47 | — 5 20.4 | 7 36 57.49 | 9.582 _n | 31 8 4.2 | 0.849 | 12.4 | 2 | " |
| | 28 | 13 41 17 | —0 51.31 | — 1 4.9 | 7 38 31.78 | 9.575 _n | +29 52 56.6 | 0.853 | 20.5 | 3 | " |

Mittlere Oerter der Vergleichsterne für 1873.0.

| | | | |
|---|------------|-------------|---|
| 1 | 7 34 22.51 | +36 54 16.4 | Hamburger Meridian-Beobachtungen Nr. 40 |
| 2 | 7 40 42.43 | 31 13 22.1 | " " " 42 |
| 3 | 7 39 22.38 | 29 53 58.7 | " " " 41 |

August 22: Comet rund und allmählig nach der Mitte zu verdichtet, 2' im Durchmesser.

Comet d, 1873 (Henry).

| 1873 | Mt. Hamb. Zt. | $\Delta\alpha$ | $\Delta\delta$ | α app. | L. f. p. | δ app. | L. f. p. | Zahl d. Vgl. | Vgl.-Beob. Stern acht. |
|---------|--|-------------------------------------|----------------|--|--------------------|---------------|----------|--------------|------------------------|
| August | 27 11 ^h 36 ^m 41 ^s | -0 ^m 52 ^s .26 | -2' 38".4 | 7 ^h 53 ^m 25 ^s .24 | 9.550 _n | +58°18' 16".1 | 0.876 | 13.4 | 1 P |
| | 28 13 4 51 | +1 13.21 | -2 42.4 | 8 1 18.75 | 9.723 _n | 57 51 34.7 | 0.809 | 20.5 | 2 " |
| | 31 9 41 19 | -2 44.52 | +0 20.3 | 8 24 30.87 | 7.918 | 56 16 45.9 | 0.920 | 16.4 | 3 " |
| Septbr. | 5 12 31 55 | -0 48.49 | 2 3.3 | 9 13 35.85 | 9.502 _n | 51 16 54.5 | 0.893 | 24.4 | 4 " |
| | 6 10 40 27 | -1 10.03 | -3 37.4 | 9 23 24.74 | 8.704 _n | 49 56 7.4 | 0.933 | 24.5 | 5 " |
| | 13 8 15 12 | -1 23.18 | +0 39.0 | 10 42 5.89 | 9.461 | +32 42 36.4 | 0.904 | 16.4 | 6 R |

Mittlere Oerter der Vergleichsterne für 1873.0.

| | | | |
|---|--|---------------|---|
| 1 | 7 ^h 54 ^m 17 ^s .08 | +58°20' 58".1 | Helsingfors Meridian-Beob. (briefliche Mittheilung des Herrn Prof. Krueger) |
| 2 | 8 0 5.11 | 57 54 20.7 | " " " " " |
| 3 | 8 27 14.97 | 56 16 29.2 | Hamburger Meridian-Beobachtungen Nr. 44 |
| 4 | 9 14 23.93 | 51 19 1.0 | " " " " " |
| 5 | 9 24 34.38 | 49 59 48.9 | " " " " " |
| 6 | 10 43 28.73 | +32 41 58.8 | Weisse II 10 ^b 857 |

Bemerkungen. August 28: Comet sehr hell, etwa 4' im Durchmesser, mit sternartigem, etwas östlich von der Mitte der Nebelmasse gelegenen Kern.

September 6: Durch Wolken beobachtet.

" 13: Comet und Vergleichstern in Folge ihres tiefen Standes am nordwestlichen Horizont sehr schwach und nur kurze Zeit sichtbar.

Comet g, 1873 (Coggia).

| | | | | | | | | |
|--------|------------|----------|---------------------|-------|-------------|-------|------|-----|
| Novbr. | 12 6 23 10 | -1 33 40 | 3 33.4 16 6 18.53 | 9.579 | +22 23 38.8 | 0.807 | 15.5 | 1 P |
| " | 6 57 13 | -1 46 22 | 16 6 5.71 | 9.578 | | | 28. | " R |
| " | 7 0 49 | | -0 39.8 | | 22 19 25.6 | 0.827 | .5 | " " |
| 13 | 6 13 51 | -3 2.64 | +1 26.5 15 57 34.49 | 9.571 | 19 32 34.2 | 0.819 | 19.5 | 2 " |
| 14 | 6 20 40 | +0 58.43 | +3 20.3 15 48 44.91 | 9.564 | +16 30 29.3 | 0.835 | 8.2 | 3 " |

Mittlere Oerter der Vergleichsterne für 1873.0.

| | | | |
|---|-------------|-------------|--------------------------------|
| 1 | 16 7 51.70 | +22 20 10.8 | B. B. +22°29'40" |
| 2 | 16 0 36.83 | 19 31 13.9 | Weisse II 15 ^b 1527 |
| 3 | 15 47 46.11 | 16 27 16.2 | Taylor 8294 |

Bemerkungen. November 12: Comet 4 — 5' gross, sehr verwaschen und dabei stark granulirt, bei den letzten Vergleichungen bereits sehr schwach.

" 13: Luft sehr unrein, Comet sehr schwach und verwaschen.

" 14: Durch eine Wolkenlücke beobachtet, Comet leidlich hell.

Comet a, 1874 (Winnecke).

| | | | | | | | |
|------|---------|-------------|----------|-------------|--------------------|-----|-----|
| 1874 | Februar | 21 17 10 20 | -7 24.4 | +24 35 31.4 | 0.783 | .5 | 1 P |
| | " | 11 10 48 | +4 38.55 | 29 44 24.52 | 9.582 _n | 16. | " " |

Mittlerer Ort des Vergleichsterns für 1874.0.

| | | | |
|---|-------------|-------------|---|
| 1 | 20 39 47.54 | +24 43 11.6 | Hamburger Meridian-Beobachtungen Nr. 66 |
|---|-------------|-------------|---|

Comet b, 1874 (Winnecke).

| | | | | | | | | |
|-------|-------------|----------|---------------------|--------------------|------------|-------|------|-----|
| April | 20 15 11 42 | -0 2.10 | -4 9.6 20 50 50.04 | 9.463 _n | +1 46 40.7 | 0.845 | 24.5 | 1 P |
| | 21 14 21 45 | +0 17.44 | +1 44.5 20 46 10.91 | 9.507 _n | 3 0 52.5 | 0.843 | 25.8 | 2 R |
| | 22 15 2 19 | -2 24.69 | -1 36.2 20 40 52.76 | 9.453 _n | 4 24 29.5 | 0.834 | 28.7 | 3 " |
| | 23 14 46 34 | -4 41.92 | +4 25.7 20 35 23.57 | 9.469 _n | 5 49 49.9 | 0.830 | 24.6 | 4 P |
| | 26 15 7 10 | -0 27.38 | 20 15 8.25 | 9.380 _n | | | 12. | 5 " |
| | " 15 12 29 | | +6 42.4 | | 10 42 4.4 | 0.795 | 3 | 5 " |
| | 27 14 11 27 | -5 22.57 | +7 37.9 20 8 56.24 | 9.461 _n | 12 24 41.2 | 0.796 | 20.5 | 6 R |
| | 30 12 52 5 | +1 44.38 | -3 19.0 19 43 31.27 | 9.520 _n | 18 9 53.3 | 0.778 | 17.6 | 7 P |
| Mai | 2 12 19 17 | -0 25.31 | 19 22 59.83 | 9.528 _n | | | 14. | 8 " |

| 1874 | Mt. Hamb. Zt. | $\triangle\alpha$ | $\triangle\delta$ | α app. | L. f. p. | δ app. | L. f. p. | Zahl d. Vgl. | Vgl.-Stern | Beob.-acht. |
|------|---|------------------------------------|-------------------|--|--------------------|-----------------|----------|--------------|------------|-------------|
| Mai | 2 12 ^h 29 ^m 40 ^s | | —3' 41'' 5 | | | +22° 21' 32'' 8 | 0.751 | .5 | 8 | P |
| | 5 11 44 1 | —0 ^m 29 ^s 27 | +6 55.7 | 18 ^h 46 ^m 10 ^s 53 | 9.548 _n | 28 44 38.1 | 0.701 | 26.6 | 9 | „ |
| | 6 11 32 1 | —2 58.47 | | 18 32 16.54 | 9.551 _n | | | 4. | 10 | „ |
| | „ 11 36 46 | | +4 44.6 | | | 30 48 21.1 | 0.677 | .1 | 10 | „ |
| | „ 14 30 42 | —2 43.27 | —8 41.6 | 18 30 28.88 | 9.032 _n | 31 3 30.3 | 0.538 | 16.4 | 11 | „ |
| | 13 12 51 5 | —0 2.31 | —8 23.3 | 16 38 1.61 | 8.624 _n | 41 17 28.5 | 0.271 | 21.6 | 12 | R |
| | 14 12 27 50 | —2 41.52 | —10 6.2 | 16 21 51.13 | 8.691 _n | 41 59 14.4 | 0.246 | 20.5 | 13 | „ |
| | 15 14 5 53 | —2 53.07 | | 16 4 46.76 | 9.286 | | | 16. | 14 | P |
| | „ 14 9 48 | | —9 7.1 | | | 42 33 34.1 | 0.295 | .4 | 14 | „ |
| | 18 12 26 33 | +0 24.62 | +1 12.3 | 15 21 58.04 | 9.022 | 43 7 25.9 | 0.220 | 21.6 | 15 | R |
| | 19 12 22 24 | —0 57.97 | +0 41.4 | 15 9 0.32 | 9.118 | 43 4 30.3 | 0.233 | 24.6 | 16 | „ |
| | 20 11 11 33 | —2 31.22 | +7 19.1 | 14 57 25.91 | 8.210 | 42 56 21.1 | 0.204 | 16.4 | 17 | „ |
| | 21 13 54 59 | +4 3.33 | —12 54.2 | 14 44 50.33 | 9.544 | 42 41 43.6 | 0.443 | 3.1 | 18 | P |
| | 24 11 45 13 | +0 5.94 | —0 20.3 | 14 16 38.33 | 0.291 | 41 44 47.1 | 0.321 | 14.4 | 19 | R |
| | „ 12 28 12 | —0 10.43 | —0 58.1 | 14 16 21.96 | 9.435 | 41 44 9.3 | 0.385 | 13.4 | „ | „ |
| | 25 11 48 54 | +3 28.17 | —1 8.6 | 14 8 20.37 | 9.348 | 41 21 15.5 | 0.354 | 20.5 | 20 | „ |
| | 26 11 56 32 | +0 27.68 | +2 12.8 | 14 0 39.68 | 9.407 | 40 56 24.3 | 0.392 | 15.5 | 21 | „ |
| | 27 12 16 35 | +0 25.47 | +1 23.2 | 13 53 35.10 | 9.483 | 40 30 51.9 | 0.448 | 4.2 | 22 | „ |
| | 31 12 10 56 | —2 0.63 | +8 48.8 | 13 30 36.59 | 9.534 | 38 46 13.5 | 0.529 | 20.5 | 23 | „ |
| Juni | 7 12 17 39 | —1 43.54 | —1 26.6 | 13 4 19.46 | 9.594 | 35 55 17.0 | 0.647 | 16.4 | 24 | „ |
| | 8 12 7 54 | —1 6.33 | —7 43.5 | 13 1 37.46 | 9.588 | 35 33 5.1 | 0.644 | 4.1 | 25 | „ |
| | 10 12 1 9 | —2 9.73 | +7 25.6 | 12 56 44.63 | 9.590 | +34 49 26.0 | 0.659 | 16.4 | 26 | „ |

Mittlere Oerter der Vergleichsterne für 1874.0.

| | | | |
|----|--|----------------|---|
| 1 | 20 ^h 50 ^m 52 ^s 12 | + 1° 51' 2'' 4 | Schjellerup 8393 |
| 2 | 20 45 53.40 | 2 59 20.5 | Lamont 7875 |
| 3 | 20 38 27.94 | 4 26 18.5 | „ 5519 |
| 4 | 20 40 5.49 | 5 45 37.5 | Schjellerup 8270 |
| 5 | 20 15 35.28 | 10 35 37.2 | „ 7986 |
| 6 | 20 14 18.44 | 12 17 18.9 | Hamburger Meridian-Beob. Nr. 65 |
| 7 | 19 41 46.26 | 18 13 29.9 | δ Sagittae, Pulkowaer Haupt-Sterne 279 |
| 8 | 19 23 24.35 | 22 18 9.9 | Rümker 7497 |
| 9 | 18 46 38.68 | 28 38 1.8 | Rümker 6795 |
| 10 | 18 35 13.79 | 30 43 56.0 | Weisse II 18 ^b 1038 |
| 11 | 18 33 10.91 | 31 12 31.5 | B. B. 31 ^b 3313 |
| 12 | 16 38 1.76 | 41 26 6.6 | Hamburger Meridian-Beob. Nr. 64 |
| 13 | 16 24 30.41 | 42 9 36.3 | „ „ „ 63 |
| 14 | 16 7 37.51 | 42 42 53.7 | „ „ „ 62 |
| 15 | 15 21 30.97 | 43 6 22.1 | „ „ „ 61 |
| 16 | 15 9 55.84 | 43 3 56.5 | „ „ „ 60 |
| 17 | 14 59 54.69 | 42 49 8.6 | „ „ „ 59 |
| 18 | 14 40 44.57 | 42 54 42.8 | „ „ „ 58 |
| 19 | 14 16 30.05 | 41 45 10.3 | „ „ „ 57 |
| 20 | 14 4 49.91 | 41 22 26.0 | „ „ „ 56 |
| 21 | 14 0 9.75 | 40 54 13.1 | Weisse II 13 ^b 1306 |
| 22 | 13 53 7.41 | 40 29 29.7 | Hamburger Meridian-Beob. Nr. 55 |
| 23 | 13 32 35.17 | 38 37 24.1 | „ „ „ 54 |
| 24 | 13 6 1 23 | 35 56 41.0 | „ „ „ 53 |
| 25 | 13 2 42.03 | 35 40 46.0 | B. B. 35 ^b 2408 |
| 26 | 12 58 52.66 | +34 41 57.6 | „ „ 34 2382 |

- Bemerkungen. April 21: Der Comet ziemlich gross, der verdichtete Theil etwa $1\frac{1}{2}'$ im Durchmesser, mit einer ausgedehnten Coma, welche scheinbar in der Richtung nach der Sonne zu verlängert erschien.
- „ 26: Beobachtung in der Morgendämmerung angestellt, der Comet bereits ziemlich schwach.
- „ 27: Der Comet zeigte eine ausgedehnte Coma, welche sich im hellen Mondschein wohl auf 6 — 8 Minuten erstreckte, mit einer etwas blassen, aber compacten centralen Verdichtung von etwa $50''$ im Durchmesser.
- Mai 13: Der Comet, obgleich noch immer beträchtlich gross, hat inzwischen wesentlich an Helligkeit verloren.
- „ 19: Der Comet sehr verwaschen, mit einer merklichen Verdichtung im vorausgehenden Theile, die Nebelmasse scheint stark granulirt zu sein.
- „ 25: Heller Mondschein. Der Comet zeigte eine sehr blasse und verwaschene Nebelmasse mit einem im vorausgehenden Theile befindlichen, zuweilen aufleuchtenden sternartigem Punkte, auf diesen thunlichst eingestellt.
- Juni 8 und 10: Der Comet in der hellen Dämmerung an der Grenze der Sichtbarkeit.

Comet c, 1874 (Coggia).

| 1874 | Mt. Hamb. Zt. | $\Delta\alpha$ | $\Delta\delta$ | α app. | L. f. p. | δ app. | L. f. p. | Zahl Vgl.-Beobd. | Vgl. Stern | acht. |
|-------|---|-------------------------------------|----------------|--|----------|---------------|----------|------------------|------------|-------|
| April | 20 9 ^h 38 ^m 29 ^s | -8 ^m 14 ^s .91 | -0°35'5 | 6 ^h 25 ^m 18 ^s .03 | 9.995 | +69°44'56"0 | 0.129 | 20.4 | 1 | P |
| | 21 11 52 18 | -9 5.86 | -5 1.8 | 6 24 27.03 | 9.973 | 69 40 29.6 | 0.633 | 16.4 | 1 | R |
| | 22 13 27 6 | -0 38.69 | +8 48.1 | 6 23 43.89 | 9.839 | 69 36 6.7 | 0.783 | 15.5 | 2 | „ |
| | 23 10 39 47 | +0 6.41 | +5 42.4 | 6 23 11.57 | 0.000 | 69 33 0.9 | 0.475 | 24.6 | „ | „ |
| | 24 12 25 55 | -0 27.54 | +1 45.4 | 6 22 37.57 | 9.884 | 69 29 3.8 | 0.733 | 12.3 | „ | P |
| | 26 10 39 54 | -1 15.78 | -4 44.0 | 6 21 49.26 | 9.993 | 69 22 34.1 | 0.517 | 14.6 | „ | „ |
| | 27 12 59 59 | -1 35.76 | -8 13.6 | 6 21 29.23 | 9.844 | 69 19 4.4 | 0.779 | 24.6 | „ | R |
| | 30 11 23 38 | -2 5.73 | -16 50.3 | 6 20 59.16 | 9.954 | 69 10 27.2 | 0.668 | 16.4 | „ | P |
| Mai | 2 14 14 49 | -2 6.04 | -22 23.7 | 6 20 58.77 | 9.542 | 69 4 53.5 | 0.853 | 24.6 | „ | „ |
| | 5 10 24 39 | -1 7.83 | +15 58.0 | 6 21 23.23 | 9.972 | 68 58 45.6 | 0.579 | 32.6 | 3 | „ |
| | 7 11 53 37 | -0 31.82 | +12 14.5 | 6 21 59.15 | 9.883 | 68 55 1.7 | 0.749 | 18.6 | „ | „ |
| | 12 13 5 42 | +1 55.63 | +6 2.0 | 6 24 26.51 | 9.661 | 68 48 48.3 | 0.839 | 16.4 | „ | „ |
| | 13 13 37 34 | +2 35.44 | +5 13.8 | 6 25 6.30 | 9.526 | 68 47 59.9 | 0.856 | 24.6 | „ | R |
| | 14 11 0 59 | +3 12.05 | +4 47.7 | 6 25 42.89 | 9.918 | 68 47 33.6 | 0.709 | 24.6 | „ | „ |
| | 15 13 25 5 | -1 21.37 | +1 36.0 | 6 26 31.90 | 9.557 | 68 47 5.8 | 0.853 | 20.5 | 4 | P |
| | 18 13 17 48 | +1 8.99 | +1 10.3 | 6 29 2.20 | 9.547 | 68 46 39.5 | 0.854 | 34.9 | „ | R |
| | 19 11 26 48 | +2 0.05 | +1 18.5 | 6 29 53.24 | 9.861 | 68 46 47.5 | 0.766 | 23.6 | „ | „ |
| | 20 11 59 57 | +3 0.07 | +1 34.0 | 6 30 53.24 | 9.789 | 68 47 2.8 | 0.804 | 20.5 | „ | „ |
| | 21 12 42 58 | +4 3.44 | +1 55.7 | 6 31 56.60 | 9.656 | 68 47 24.3 | 0.840 | 20.5 | „ | P |
| | 22 12 32 36 | +5 6.34 | +2 28.0 | 6 32 59.48 | 9.682 | 68 47 56.3 | 0.835 | 14.4 | „ | R |
| | 23 11 49 19 | +6 10.86 | +3 0.1 | 6 34 3.99 | 9.794 | 68 48 28.3 | 0.802 | 16.4 | „ | P |
| | 24 10 43 43 | -4 54.98 | -12 52.6 | 6 35 9.77 | 9.905 | 68 49 13.3 | 0.727 | 20.5 | 5 | R |
| | 25 10 21 44 | -3 45.61 | -12 2.5 | 6 36 19.11 | 9.927 | 68 50 3.2 | 0.698 | 20.5 | „ | „ |
| | 26 12 36 24 | -2 25.48 | -11 9.5 | 6 37 39.24 | 9.629 | 68 50 56.0 | 0.844 | 24.6 | „ | „ |
| | 27 11 18 39 | -1 12.94 | -10 11.8 | 6 38 51.77 | 9.836 | 68 51 53.5 | 0.781 | 19.5 | „ | „ |
| | 31 10 9 51 | -1 19.24 | +1 3.7 | 6 44 15.75 | 9.925 | 68 55 59.0 | 0.701 | 20.5 | 6 | „ |
| Juni | 1 11 7 39 | +0 9.03 | +2 6.8 | 6 45 44.02 | 9.834 | 68 57 1.8 | 0.783 | 24.6 | „ | „ |
| | 4 12 45 17 | -0 26.44 | -4 24.7 | 6 50 24.22 | 9.487 | 69 0 3.1 | 0.858 | 24.6 | 7 | „ |
| | 5 10 43 11 | +1 0.11 | -3 44.1 | 6 51 50.76 | 9.863 | 69 0 43.5 | 0.766 | 22.6 | „ | „ |
| | 7 13 9 35 | +4 26.44 | -2 37.8 | 6 55 17.09 | 9.240 | 69 1 49.3 | 0.868 | 20.5 | „ | „ |
| | 8 12 48 31 | +0 11.15 | -3 25.8 | 6 57 19.09 | 9.405 | 69 2 5.0 | 0.863 | 28.7 | „ | „ |

| 1874 | Mt. Hamb. Zt. | $\Delta\alpha$ | $\Delta\delta$ | α app. | L. f. p. | δ app. | L. f. p. | Zahl d. Vgl. Stern | Vgl. Stern | Beob. acht. |
|------|---|------------------------------------|----------------|---|----------|---------------|----------|--------------------|------------|-------------|
| Juni | 10 12 ^h 49 ^m 3 ^s | —1 ^m 2 ^s .23 | + 0' 58''7 | 7 ^h 0 ^m 23 ^s .40 | 9.366 | +69° 1' 46''8 | 0.865 | 17.5 | 9 | R |
| | 12 12 41 30 | | — 0 43.7 | | | 69 0 3.9 | 0.863 | 2 | " | " |
| | „ 12 44 24 | +2 29.38 | | 7 3 55.02 | 9.367 | | | 5 | " | " |
| | 13 12 30 20 | +1 5.96 | | 7 3 28.10 | 9.450 | | | 4 | 10 | " |
| | „ 12 32 40 | | + 1 57.6 | | | 68 59 35.8 | 0.861 | 2 | " | " |
| | 20 11 11 19 | —2 18.00 | + 5 40.1 | 7 18 13.85 | 9.714 | 68 27 51.4 | 0.828 | 4.1 | 11 | " |
| | 21 11 47 52 | —0 26.02 | — 3 7.3 | 7 20 5.83 | 9.571 | 68 19 3.7 | 0.852 | 24.6 | " | " |
| | 28 11 53 52 | +2 38.44 | | 7 32 5.33 | 9.426 | | | 14 | 12 | L |
| | „ 11 58 28 | | — 5 48.6 | | | 66 25 8.9 | 0.873 | 4 | " | " |
| | 30 10 26 28 | +1 3.52 | | 7 34 56.53 | 9.720 | | | 20 | 13 | " |
| | „ 10 40 54 | | + 1 17.3 | | | 65 28 51.6 | 0.837 | 4 | " | " |
| Juli | 2 10 0 26 | —2 26.99 | + 0 1.2 | 7 37 35.93 | 9.746 | 64 15 23.0 | 0.814 | 20.5 | 14 | " |
| | 5 11 32 27 | —5 3.76 | — 1 11.5 | 7 41 9.71 | 9.390 | 61 37 58.9 | 0.889 | 20.5 | 15 | R |
| | 6 10 50 35 | +2 54.09 | — 5 0.3 | 7 42 7.55 | 9.495 | 60 34 11.1 | 0.881 | 16.4 | 16 | L |
| | 8 11 1 10 | +5 28.41 | — 5 26.0 | 7 43 55.34 | 9.430 | 57 55 46.0 | 0.894 | 12.3 | 17 | " |
| | 9 11 40 27 | —3 12.13 | — 2 34.1 | 7 44 44.80 | 9.165 | 56 17 54.8 | 0.914 | 20.5 | 18 | " |
| | 13 10 50 58 | +1 47.87 | — 8 40.7 | 7 47 19.42 | 9.350 | 47 44 45.0 | 0.923 | 17.5 | 19 | " |
| | 14 10 53 11 | —0 46.28 | — 5 41.4 | 7 47 52.41 | 9.251 | +44 53 12.1 | 0.929 | 15.4 | 20 | " |

Mittlere Oerter der Vergleichsterne für 1874.0.

| α | δ | |
|--|----------------|---|
| 1 6 ^h 33 ^m 33 ^s .72 | +69° 45' 10".2 | Hamburger Meridian-Beobachtungen Nr. 34 |
| 2 6 23 6.26 | 69 26 57.8 | " " " 32 |
| 3 6 22 32.55 | 68 42 26.9 | " " " 31 |
| 4 6 27 54.92 | 68 45 12.7 | " " " 33 |
| 5 6 40 6.40 | 69 1 50.1 | 43 Camelop (Pulkowaer Zusatz-Sterne) |
| 6 6 45 36.64 | 68 54 40.7 | Hamburger Meridian-Beobachtungen Nr. 35 |
| 7 6 50 52.29 | 69 4 13.9 | " " " 36 |
| 8 6 57 9.52 | 69 5 17.5 | " " " 37 |
| 9 7 1 27.16 | 69 0 35.1 | B. B. 69°413 |
| 10 7 4 35.95 | 68 57 25.8 | Hamburger Meridian-Beobachtungen Nr. 39 |
| 11 7 20 33.11 | 68 21 59.9 | Micrometrisch angeschlossen an Gr. 1308 (Pulkowaer Haupt-Stern) |
| 12 7 29 27.85 | 66 30 47.6 | B. B. 66°519 |
| 13 7 33 54.88 | 65 27 24.9 | Radeliffe Catalog 2012 |
| 14 7 40 3.66 | 64 15 12.6 | Argel. Astr. Nachr. 2014 |
| 15 7 46 14.02 | 61 39 1.7 | " " " " |
| 16 7 39 13.99 | 60 39 3.2 | " " " " |
| 17 7 38 27.36 | 58 1 4.3 | Argelander-Oelzen 8255 |
| 18 7 47 57.25 | 56 20 21.1 | " 8421 |
| 19 7 45 31.67 | 47 53 18.7 | 26 Lyncis (Pulkowaer Zusatz-Stern) |
| 20 7 48 38.75 | +44 58 46.5 | Hamburger Meridian-Beobachtungen Nr. 43 |

Bemerkungen. April 21: Der Comet rund und compact, etwa 50" im Durchmesser, sehr lichthell.

„ 27: Der Comet, trotz des hellen Mondscheins, sehr schön zu sehen, er ist beträchtlich heller geworden und zeigt eine deutlich erkennbare, 1 Minute grosse, im Parallel etwas gestreckte Verdichtung mit sternartigem Kern.

Mai 5: Der Comet sehr hell und gut zu beobachten, er zeigt eine scharf markirte kernartige Verdichtung von etwa 40" im Durchmesser und eine sehr zarte dieselbe umgebende Coma.

15: Comet sehr hell, mit Schweifansatz im Positionswinkel 35°.

Mai 25: Bilder sehr unruhig.

Juni 10: Kerndurchmesser, von N. nach S. gemessen, 3''4.

„ 12, 13, 20: Der Comet konnte nur auf Augenblicke durch Wolkenlücken beobachtet werden.

„ 21: Der Comet bot eine glänzende Erscheinung dar, der Schweif, anfänglich in der hellen Dämmerung nur schwach, wurde nach unten (im Fernrohr) breiter und zeigte sich in der Mitte merklich dunkler, als an den Rändern.

„ 27: Der Kern etwas unregelmässig und nicht scharf begrenzt, von N. nach S. gemessen, 3''2 im Durchmesser.

Juli 8: Der Comet zeigte 2 Enveloppen, sowie am Kern einen der Sonne zugekehrten deutlich erkennbaren, lichten, fächerförmigen Ansatz. Auf der voraufgehenden Seite liess sich, in der Nähe des Scheitels, ein auffallender, schwach nach unten gekrümmter, vom Kern oder der innern Enveloppe ausgehender, federförmiger Ausläufer beiläufig 3 Minuten weit verfolgen. Der Kern erschien schwach elliptisch, Durchmesser der grossen Axe von N. nach S. 4''3.

„ 9: Höhe des lichten Sectors etwa 32''. Kerndurchmesser 4''1. Der voraufgehende Theil des Schweifs schien weniger hell als der folgende zu sein.

„ 14: Kern sehr scharf begrenzt, Durchmesser 4''1.

Comet d, 1874 (Borrelly).

| 1874 | Mt. Hamb. Zt. | $\Delta\alpha$ | $\Delta\delta$ | α app. | L. f. p. | δ app. | L. f. p. | Zahl d. Vgl. | Vgl.-Stern | Beobacht. |
|---------|---|-------------------------------------|----------------|---|--------------------|----------------|----------|--------------|------------|-----------|
| August | 3 13 ^h 19 ^m 29 ^s | -0 ^m 32 ^s .28 | - 0' 9" 8 | 15 ^h 11 ^m 53 ^s .34 | 9.917 | +65° 38' 57" 9 | 0.614 | 18.3 | 1 | L |
| | 7 10 26 34 | -1 36.10 | - 9 39.3 | 14 51 27.63 | 9.967 | 67 48 11.9 | 0.353 | 20.5 | 2 | „ |
| | 9 10 59 28 | +2 48.85 | | 14 39 53.37 | 9.985 | | | 15 | 3 | „ |
| | „ 11 26 26 | | + 6 31.5 | | | 68 49 4.3 | 0.407 | 4 | „ | „ |
| | „ 14 2 0 | +2 4.47 | | 14 39 8.99 | 9.757 | | | 17 | „ | „ |
| | „ 14 30 13 | | +10 1.8 | | | 68 52 34.6 | 0.785 | 3 | „ | „ |
| | 10 11 9 31 | +1 24.20 | + 1 31.3 | 14 33 54.05 | 9.997 | 69 16 58.4 | 0.370 | 17.4 | 4 | „ |
| | 12 10 28 15 | +0 57.42 | | 14 21 36.56 | 0.012 | | | 12 | 5 | „ |
| | „ 10 44 8 | | - 1 10.0 | | | 70 9 45.7 | 0.329 | 4 | „ | „ |
| | 13 10 41 51 | +6 26.43 | -11 5.2 | 14 15 4.02 | 0.021 | 70 28 26.0 | 0.355 | 15.3 | 6 | „ |
| | 15 12 2 9 | -3 18.38 | | 14 1 4.11 | 0.000 | | | 14 | 7 | „ |
| | „ 12 25 6 | | -11 25.1 | | | 71 22 13.3 | 0.679 | 5 | „ | „ |
| | 16 10 1 30 | +0 27 76 | | 13 54 35.82 | 0.048 | | | 15 | 8 | „ |
| | „ 10 13 23 | | +11 18.8 | | | 71 41 28.7 | 0.344 | 5 | „ | „ |
| | 18 11 33 59 | +1 31.71 | | 13 39 21.53 | 0.120 | | | 15 | 9 | „ |
| | „ 11 42 54 | | - 1 40.9 | | | 72 21 34.6 | 0.636 | 5 | „ | „ |
| | 19 9 51 15 | +3 44.36 | +11 | 13 32 13.45 | 0.069 | 72 38 | | 15 | 10 | „ |
| | 21 9 40 40 | -6 33.24 | + 6 2.3 | 13 16 21.77 | 0.079 | 73 8 53.3 | 0.413 | 25.5 | 11 | „ |
| | 22 11 41 22 | -2 27.20 | - 4 38.4 | 13 7 27.52 | 9.978 | 73 23 27.7 | 0.719 | 20.4 | 12 | „ |
| | 24 12 53 59 | +0 55.04 | | 12 50 6.11 | 9.740 | | | 15 | 13 | „ |
| | „ 13 19 17 | | + 2 46.7 | | | 73 46 41.9 | 0.815 | 5 | „ | „ |
| | 25 14 5 49 | -2 4.57 | +10 6.4 | 12 41 0.66 | 9.014 | 73 56 4.9 | 0.846 | 20.4 | 14 | „ |
| Septbr. | 4 10 9 8 | +6 58.92 | - 2 48.2 | 11 13 52.22 | 9.839 | 74 6 31.6 | 0.793 | 25.5 | 15 | „ |
| | 10 10 3 17 | +6 20.90 | + 8 44.2 | 10 37 55.73 | 9.595 | 73 10 2.9 | 0.835 | 20.4 | 16 | „ |
| | 14 10 37 52 | -2 16.97 | - 7 30.2 | 9 56 15.01 | 8.914 _n | 72 10 30.8 | 0.856 | 20.7 | 17 | „ |
| | 15 10 45 21 | -2 49.48 | - 4 22.0 | 9 49 29.23 | 9.230 _n | 71 53 33.8 | 0.855 | 25.5 | 18 | „ |
| | 19 13 16 25 | +0 25.38 | | 9 23 44.97 | 9.943 _n | | | 20 | 19 | „ |
| | „ 13 20 48 | | +13 54.5 | | | 70 36 39.5 | 0.704 | 5 | „ | „ |
| | 20 11 12 47 | -4 56.86 | - 4 30.5 | 9 18 22.76 | 9.693 _n | 70 18 14.2 | 0.830 | 20.4 | „ | „ |

| 1874 | Mt. Hamb. Zt. | $\Delta\alpha$ | $\Delta\delta$ | α app. | L. f. p. | δ app. | L. f. p. | Zahl d. Vgl. Stern | Vgl. Stern | Beob. acht. |
|------------|---|-------------------------------------|----------------|--|--------------------|----------------|----------|--------------------|------------|-------------|
| Septbr. 21 | 11 ^h 27 ^m 29 ^s | +0 ^m 38 ^s .43 | + 4' 7''0 | 9 ^h 12 ^m 36 ^s .41 | 9.762 _n | +69° 57' 17''5 | 0.814 | 14.7 | 20 | L |
| 23 | 13 25 6 | -1 53.21 | + 2 39.3 | 9 1 6. | 9.966 _n | 69 15 | 0.628 | 20.4 | 21 | " |
| 26 | 8 2 49 | -4 33.71 | + 1 | 8 46 37.50 | 8.958 | | | 15 | 22 | " |
| 29 | 12 25 16 | +0 15.51 | | 8 31 0.36 | 9.916 _n | | | 19 | 23 | " |
| " | 12 32 30 | | + 1 24.8 | | | 66 50 44.5 | 0.669 | 5 | " | " |
| 30 | 11 12 44 | +2 49.42 | + 7 | 8 29 13.95 | 9.831 _n | 66 26 | | 11 | 24 | " |
| October 1 | 10 18 39 | +3 12.53 | | 8 21 58.74 | 9.741 _n | | | 13 | 25 | " |
| " | 10 31 2 | | + 1 10.3 | | | 66 1 41.4 | 0.807 | 5 | " | " |
| 5 | 11 32 11 | -1 35.12 | | 8 2 24.14 | 9.872 _n | | | 16 | 26 | " |
| " | 11 34 26 | | + 7 33.8 | | | 64 16 37.9 | 0.690 | 4 | " | " |
| 8 | 13 58 46 | -4 48.61 | | 7 48 46.18 | 9.923 _n | | | 18 | 27 | " |
| " | 14 13 40 | | + 8 56.3 | | | 63 4 35.2 | 0.119 | 5 | " | " |
| 9 | 13 6 46 | +1 19.86 | | 7 45 43.40 | 9.873 _n | | | 15 | 28 | " |
| " | 13 40 1 | | - 6 14.8 | | | 62 15 37.2 | 0.286 | 5 | " | " |
| 12 | 13 12 56 | -2 21.75 | | 7 32 46.16 | 9.838 _n | | | 13 | 29 | " |
| " | 13 23 39 | | - 3 33.2 | | | 60 44 12.4 | 0.292 | 4 | " | " |
| 20 | 14 55 46 | +0 41.68 | | 6 58 27.99 | 9.515 _n | | | 6 | 30 | " |
| " | 14 59 50 | | + 4 31.8 | | | +56 7 32.5 | 9.236 | 1 | " | " |

Mittlere Oerter der Vergleichsterne für 1874.0.

| | α | δ | | |
|----|---|----------------|---|-----------|
| 1 | 15 ^h 12 ^m 23 ^s .96 | +65° 38' 59''5 | Micrometrisch angeschlossen an Argelander-Oelzen | 15234 — 5 |
| 2 | 14 53 2.37 | 67 57 42.9 | " " " " | 15015 |
| 3 | 14 37 3.39 | 68 42 24.7 | Argelander-Oelzen | 14792 |
| 4 | 14 32 28.81 | 69 15 19.1 | " | 14736 |
| 5 | 14 20 38.31 | 70 10 48.0 | B. B. +70° 783 | |
| 6 | 14 8 36.91 | 70 39 23.8 | Argelander-Oelzen | 14401 — 2 |
| 7 | 14 4 21.98 | 71 33 31.4 | " | 14331 |
| 8 | 13 54 7.67 | 71 30 3.3 | " | 14158 — 9 |
| 9 | 13 37 49.68 | 72 23 9.6 | " | 13919 |
| 10 | 13 28 29.05 | 72 26 36.7 | " | 13769 |
| 11 | 13 22 55.13 | 73 2 46.1 | Gr. 2001 (Pulkowaer Zusatz-Stern) | |
| 12 | 13 9 54.99 | 73 28 2.0 | Radcliffe 2987 | |
| 13 | 12 49 11.51 | 73 43 52.3 | Argelander-Oelzen | 13119 |
| 14 | 12 43 5.72 | 73 45 56.1 | " | 13021 |
| 15 | 11 6 53.76 | 74 9 24.2 | Hamburger Meridian-Beobachtungen Nr. 52 | |
| 16 | 10 31 34.78 | 73 1 26.1 | Argelander-Oelzen | 11001 |
| 17 | 9 58 31.39 | 72 18 10.4 | " | 10503 |
| 18 | 9 52 17.99 | 71 58 5.5 | " | 10402 — 3 |
| 19 | 9 23 18.28 | 70 22 55.9 | δ Ursae maj. (Pulkowaer Haupt-Stern) | |
| 20 | 9 11 56.43 | 69 53 21.9 | Argelander-Oelzen | 9781 |
| 21 | 9 2 57. | 69 12.5 | B. D. 69° 513 | |
| 22 | 8 51 9.14 | 68 7 5.5 | ρ Ursae maj. (Pulkowaer Haupt-Stern) | |
| 23 | 8 30 42.39 | 66 49 31.7 | B. B. 66° 570 | |
| 24 | 8 26 21.98 | 66 19 31.6 | " " 66° 563 | |
| 25 | 8 18 43.47 | 66 0 43.0 | Kremsmünsterer Meridian-Beobachtungen Astr. Nachr. 2017 | |
| 26 | 8 3 56.25 | 64 8 53.2 | Argelander-Oelzen | 8703 |
| 27 | 7 53 31.56 | 62 55 49.8 | " | 8523 — 4 |
| 28 | 7 44 20.19 | 62 22 2.6 | Radcliffe Catalog 2044 | |
| 29 | 7 35 4.39 | 60 47 35.5 | Argelander-Oelzen | 8194 — 95 |
| 30 | 6 57 42.34 | 56 2 36.3 | Hamburger Meridian-Beobachtungen Nr. 38 | 7* |

Bemerkungen. August 3: Comet sehr verwaschen, ohne erkennbare Verdichtungsstelle, Beobachtung dadurch sehr erschwert.

„ 9: Beobachtung fortwährend durch Wolken gestört.

September 26 und 29: Comet in Folge Mondscheins und ungünstiger Luft ausserordentlich schwach.

October 12 und 20: Comet an der Grenze der Sichtbarkeit.

Comet e, 1874 (Coggia).

| 1874 | Mt. Hamb. | Zt. | $\Delta\alpha$ | $\Delta\delta$ | α app. | L. f. p. | δ app. | L. f. p. | Zahl d. Vgl. | Vgl. Stern | Beob. acht. |
|---------|-----------|---|-------------------------------------|----------------|--|--------------------|----------------|----------|--------------|------------|-------------|
| Septbr. | 4 | 11 ^h 28 ^m 57 ^s | +1 ^m 17 ^s .38 | | 4 ^h 28 ^m 32 ^s .31 | 9.580 _n | | | 31 | 1 | L |
| „ | | 11 32 44 | | + 5' 27''3 | | | +22° 31' 19''2 | 0.713 | 5 | „ | „ |
| 10 | | 12 31 52 | +2 22.16 | | 4 37 50.80 | 9.551 _n | | | 22 | 2 | „ |
| „ | | 13 14 0 | | + 2 45.8 | | | 20 26 6.4 | 0.760 | 4 | „ | „ |
| 14 | | 11 54 9 | | + 0 35.3 | | | 18 59 11.5 | 0.803 | 7 | 3 | „ |
| „ | | 11 59 12 | +0 14.26 | | 4 43 12.50 | 9.559 _n | | | 24 | „ | „ |
| 15 | | 11 35 5 | +0 23.85 | | 4 44 6.24 | 9.565 _n | | | 24 | 4 | „ |
| „ | | 11 38 5 | | — 2 2.6 | | | 18 35 34.1 | 0.811 | 10 | „ | „ |
| 19 | | 14 36 20 | —0 57.03 | | 4 49 11.01 | 9.317 _n | | | 13 | 5 | „ |
| „ | | 14 56 33 | | + 2 52.4 | | | 17 0 20.4 | 0.735 | 5 | „ | „ |
| 20 | | 12 17 20 | +0 33.40 | | 4 50 7.79 | 9.553 _n | | | 17 | 6 | „ |
| „ | | 12 23 23 | | + 6 45.2 | | | 16 39 0.5 | 0.792 | 4 | „ | „ |
| 21 | | 12 27 55 | +2 6.46 | — 7 25.3 | 4 51 7.95 | 9.521 _n | 16 14 48.4 | 0.791 | 16.5 | 7 | „ |
| October | 8 | 15 30 48 | —0 6.02 | | 5 2 10.85 | 8.515 _n | | | 18 | 8 | „ |
| „ | | 15 32 31 | | — 5 13.6 | | | 8 54 29.6 | 0.792 | 5 | „ | „ |
| „ | 9 | 14 12 4 | +1 22.07 | | 5 2 25.49 | 9.161 _n | | | 18 | 9 | „ |
| „ | | 14 13 53 | | + 8 53.3 | | | 8 29 7.5 | 0.799 | 5 | „ | „ |
| 12 | | 14 23 9 | —1 24.89 | | 5 3 2.24 | 9.051 _n | | | 16 | 10 | „ |
| „ | | 14 20 58 | | —12 52.0 | | | 7 8 37.2 | 0.808 | 5 | „ | „ |
| 18 | | 12 38 37 | +0 28.27 | | 5 3 10 28 | 9.344 _n | | | 9 | 11 | „ |
| „ | | 12 50 47 | | + 4 22.0 | | | 4 29 34.9 | 0.829 | 5 | „ | „ |
| 20 | | 13 16 29 | | + 0 50.9 | | | + 3 36 1.0 | 8.031 | 6 | 12 | „ |
| „ | | 13 18 39 | +1 23.60 | | 5 2 54.78 | 9.202 _n | | | 19 | „ | „ |

Mittlere Oerter der Vergleichsterne.

| | | | |
|----|--|----------------|--|
| 1 | 4 ^h 27 ^m 13 ^s .03 | +22° 25' 39''9 | Hamburger Meridian-Beobachtungen Nr. 23 |
| 2 | 4 35 26.61 | 20 23 7.7 | „ „ „ 24 |
| 3 | 4 42 56.13 | 18 58 22.8 | „ „ „ 25 |
| 4 | 4 44 0.25 | 18 37 23.2 | 97 Tauri seven Years Catalog und New seven Years Catalog |
| 5 | 4 50 5.83 | 16 57 13.9 | Seven Years Catalog |
| 6 | 4 49 32.15 | 16 32 1.0 | Hamburger Meridian-Beobachtungen Nr. 27 |
| 7 | 4 48 59.28 | 16 21 59.3 | B. B. +16°669 |
| 8 | 5 2 14.25 | 8 59 26.6 | Hamburger Meridian-Beobachtungen Nr. 29 |
| 9 | 5 1 1.39 | 8 19 57.3 | 14 Orionis New seven Years Catalog |
| 10 | 5 4 24.43 | 7 21 12.3 | B. B. 7°830. |
| 11 | 5 2 39.18 | 4 24 53.3 | Schjell. 1659 |
| 12 | 5 1 28.64 | + 3 34 52.3 | Hamburger Meridian-Beobachtungen Nr. 28 |

Bemerkungen. September 4: Ungünstige Luft, Comet sehr schwach.

„ 19: Comet nur mit Mühe zu sehen, Position in Declination unsicher.

October 8: Comet gut zu beobachten.

Comet f, 1874 (Borrelly).

| 1874 | Mt. Hamb. Zt. | $\triangle\alpha$ | $\triangle\delta$ | α app. | L. f. p. | δ app. | L. f. p. | Zahl d. Vgl. Stern | Vgl. Stern | Beob. acht. |
|--------|---|-------------------------------------|-------------------|--|--------------------|----------------|----------|--------------------|------------|-------------|
| Decbr. | 9 13 ^h 28 ^m 34 ^s | -2 ^m 27 ^s .80 | | 16 ^h 2 ^m 48 ^s .74 | 9.462 _n | | | 10 | 1 | L |
| " | 13 42 37 | -2 27.09 | -3' 54''7 | 16 2 49.45 | 9.492 _n | +38° 44' 38''7 | 0.899 | 8.2 | " | R |
| " | 14 12 7 | -2 26.78 | -2 37.1 | 16 2 49.76 | 9.544 _n | 38 45 56.3 | 0.881 | 15.4 | " | L |
| 10 | 6 22 27 | +0 34.72 | | 16 3 31.64 | 9.616 | | | 13 | 2 | R |
| " | 6 25 20 | | -5 9.4 | | | +39 23 55.8 | 0.825 | 3 | " | " |

Mittlere Oerter der Vergleichsterne für 1874.0.

| | | | | |
|---|--|----------------|-----------|---------------------------|
| 1 | 16 ^h 5 ^m 16 ^s .31 | +38° 48' 50''4 | Weisse II | 16 ^h 121 — 122 |
| 2 | 16 2 56.69 | 39 29 22.9 | " " | 16 ^h 50 — 52 |

Bemerkungen. December 9: Comet bei tiefem Stande anfänglich sehr schwach.

" 10: Sehr trübe Luft, Comet sehr schwach.

B. Beobachtungen am Meridiankreise.

Comet c, 1874 (Coggia).

| 1874 | Mt. Hamb. Zt. | α app. | α app. | L. f. p. | Zahl der Fäden | Beob. |
|--------|--|--|---------------|----------|----------------|-------|
| Mai 31 | 14 ^h 6 ^m 59 ^s | 6 ^h 44 ^m 27 ^s .88 | +68° 56' 7''9 | 0.873 | 11 | P |
| Juni 4 | 13 57 16 | 6 50 29.40 | 68 59 56.1 | 0.873 | 11 | " |
| 7 | 13 50 19 | 6 55 20.33 | 69 1 49.4: | 0.873 | 11 | " |
| 8 | 13 48 4 | 6 57 1.21 | 69 2 8.2 | 0.873 | 11 | " |
| 9 | 13 45 49 | 6 58 43.93 | 69 2 5.6 | 0.873 | 11 | " |
| 14 | 13 33 51 | 7 7 35.42: | 68 56 16.0 | 0.873 | 2 | " |
| 15 | 13 32 54 | 7 9 24.67 | 68 53 31.9: | 0.873 | 11 | " |
| 21 | 13 21 37 | 7 20 22.13 | 68 18 34.7 | 0.876 | 2 | " |
| 22 | 13 18 5 | 7 22 9.50 | 68 8 18.3 | 0.877 | 7 | " |
| 23 | 13 15 54 | 7 23 55.23 | 67 56 30.5 | 0.878 | 9 | " |
| 25 | 13 11 28 | 7 27 21.06 | 67 26 57.0 | 0.880 | 23 | " |
| Juli 2 | 12 54 20 | 7 37 45.53 | 64 10 11.9 | 0.894 | 7 | L |
| 5 | 12 45 59 | 7 41 12.59 | 61 34 48.0 | 0.903 | 7 | " |
| 6 | 12 43 2 | 7 42 12.31 | 60 28 47.7 | 0.907 | 7 | " |
| 8 | 12 36 57 | 7 43 59.03 | +57 49 28.0 | 0.916 | 7 | " |

Positionen einiger bei den obigen Refractorbeobachtungen benutzter Vergleichsterne, am Hamburger Meridiankreise beobachtet und auf das mittlere Aequinox 1875.0 reducirt.

| Nr. | α 1875.0 | Praec. | δ 1875.0 | Praec. | Ep. d. Beob. | Beob. |
|-----|--|----------------------|-----------------|--------|-----------------|-------|
| 1 | 0 ^h 53 ^m 43 ^s .14 | +3 ^s .101 | + 5° 31' 43''8 | +19.50 | 1874, Novbr. 8 | L |
| | 43.22 | | 45.7 | | 24 | " |
| | 43.41 | | 45.2 | | 26 | " |
| 2 | 0 57 40.80 | +3.109 | + 6 32 10.6 | +19.42 | 1874, Novbr. 8 | " |
| | 40.71 | | 9.6 | | Decbr. 23 | " |
| 3 | 0 58 41.58 | +3.114 | + 7 12 12.8 | +19.40 | 1874, Novbr. 24 | " |
| | 41.65 | | 14.2 | | 26 | " |
| 4 | 1 44 16.27 | +3.131 | + 5 47 43.4 | +18.01 | 1874, Decbr. 23 | " |
| 5 | 1 54 0.87 | +2.910 | -14 9 10.8 | +17.62 | 1874, Novbr. 24 | " |
| | 0.68 | | 10.7 | | 26 | " |
| 6 | 1 54 30.50 | +3.187 | +10 14 2.6 | +17.60 | 1874, Novbr. 7 | " |
| | 30.53 | | 4.1 | | 8 | " |
| 7 | 1 58 21.67 | +3.182 | + 9 30 56.3 | +17.44 | 1874, Decbr. 18 | " |
| | 21.50 | | 57.3 | | 23 | " |

| Nr. | α 1875.0 | Praec. | δ 1875.0 | Praec. | Ep. d. Beob. | Beob. |
|-----|--|----------------------|----------------------------|--------|-----------------|-------|
| 8 | 1 ^h 58 ^m 44 ^s .52 | +3 ^s .182 | + 9 ^h 28' 35''1 | +17.42 | 1875, Janr. 28 | L |
| | 44.49 | | 36.0 | | 30 | " |
| 9 | 2 0 57.25 | +3.202 | +11 1 32.0 | +17.32 | 1874, Decbr. 10 | " |
| 10 | 2 4 47.47 | +3.209 | +11 17 42.5 | +17.15 | 1874, Novbr. 7 | " |
| | 47.62 | | | | 8 | " |
| | 47.39 | | 43.4 | | 24 | " |
| 11 | 2 8 16.06 | +3.217 | +11 39 13.0 | +17.00 | 1874, Novbr. 7 | " |
| | 16.20 | | 15.2 | | 24 | " |
| 12 | 2 20 54.82 | +3.286 | +15 33 44.6 | +16.38 | 1874, Novbr. 7 | " |
| | 54.87 | | | | 8 | " |
| | 54.98 | | 42.5 | | 24 | " |
| 13 | 2 26 40.17 | +3.286 | +15 1 60.3 | +16.09 | 1874, Novbr. 7 | " |
| | 40.45 | | | | 8 | " |
| | 40.45 | | 58.4 | | 24 | " |
| 14 | 2 26 57.84 | +3.300 | +15 57 32.4 | +16.07 | 1874, Decbr. 2 | " |
| | 58.05 | | 33.1 | | 10 | " |
| 15 | 2 28 4.61 | +3.284 | +14 50 24.7 | +16.01 | 1874, Decbr. 23 | " |
| | 4.74 | | 26.3 | | 1875, Janr. 7 | " |
| | 4.76 | | | | 22 | " |
| 16 | 2 36 54.13 | +3.307 | +15 34 28.4 | +15.54 | 1873, Novbr. 11 | P |
| 17 | 2 38 46.02 | +3.324 | +16 29 28.7 | +15.43 | 1874, Novbr. 7 | L |
| | 46.08 | | 30.7 | | 8 | " |
| | 46.01 | | 30.5 | | Decbr. 2 | " |
| | 46.09 | | 29.4 | | 10 | " |
| 18 | 2 40 35.17 | +3.314 | +15 47 53.3 | +15.33 | 1874, Decbr. 23 | " |
| | 35.31 | | 56.8 | | 1875, Janr. 7 | " |
| | 35.35 | | 58.2 | | 22 | " |
| 19 | 2 47 52.03 | +3.607 | + 30 55 32.9 | +14.91 | 1874, Decbr. 23 | " |
| | 52.98 | | 34.4 | | 1875, Janr. 7 | " |
| | 53.24 | | 35.4 | | 22 | " |
| 20 | 3 0 29.55 | +3.514 | + 25 4 21.2 | +14.15 | 1874, Novbr. 8 | " |
| | 29.55 | | 19.5 | | 19 | " |
| | 29.65 | | 19.7 | | 24 | " |
| 21 | 3 1 19.11 | +3.517 | +25 6 41.3 | +14.10 | 1874, Novbr. 7 | " |
| 22 | 3 8 4.69 | +3.278 | +11 57 58.7 | +13.68 | 1874, Novbr. 24 | " |
| | 4.66 | | 57.6 | | Decbr. 2 | " |
| | 4.74 | | 61.9 | | 10 | " |
| | 4.68 | | 57.6 | | 23 | " |
| 23 | 4 27 16.55 | +3.445 | +22 25 48.3 | + 7.90 | 1874, Decbr. 1 | " |
| | 16.43 | | 47.2 | | 2 | " |
| | 16.45 | | 48.0 | | 4 | " |
| 24 | 4 35 30.32 | +3.690 | +20 23 13.5 | + 7.23 | 1874, Novbr. 19 | " |
| | 30.19 | | 13.9 | | 26 | " |
| | 30.38 | | 17.2 | | Decbr. 2 | " |
| 25 | 4 42 59.61 | +3.505 | +18 58 29.7 | + 6.62 | 1874, Novbr. 19 | " |
| | 59.74 | | 29.3 | | 24 | " |
| | 59.67 | | 29.5 | | 26 | " |
| | 59.52 | | 29.2 | | Decbr. 2 | " |
| 26 | 4 49 3.97 | +3.445 | +16 22 5.7 | + 6.10 | 1875, Janr. 26 | " |

| Nr. | α 1875.0 | Praec. | δ 1875.0 | Praec. | Ep. d. Beob. | Beob. |
|-----|--|----------------------|--|--------|-----------------|-------|
| 27 | 4 ^h 49 ^m 35 ^s .56 | +3 ^s .449 | +16 ^h 32 ^m 6 ^s .0 | + 6.07 | 1874, Novbr. 19 | L |
| | 35.64 | | 6.4 | | 24 | " |
| | 35.64 | | 6.1 | | 26 | " |
| | 35.55 | | 9.8 | | Decbr. 2 | " |
| 28 | 5 1 31.86 | +3.152 | + 3 34 55.3 | + 5.06 | 1874, Novbr. 19 | " |
| | 31.72 | | 57.5 | | 24 | " |
| | 31.79 | | 59.3 | | Decbr. 2 | " |
| 29 | 5 2 17.49 | +3.276 | + 8 59 29.9 | + 5.00 | 1874, Novbr. 26 | " |
| | 17.56 | | 33.3 | | 1875, Januar 26 | " |
| 30 | 5 4 27.42 | +3.239 | + 7 21 19.1 | + 4.82 | 1874, Decbr. 2 | " |
| 31 | 6 22 39.15 | +6.485 | +68 42 26.4 | - 1.97 | 1874, Juni 21 | P |
| | 38.90 | | 27.4 | | 23 | " |
| 32 | 6 23 12.88 | +6.619 | +69 26 55.8 | - 2.02 | 1874, Juni 4 | " |
| 33 | 6 28 1.25 | +6.484 | +68 45 9.6 | - 2.44 | 1874, Juni 21 | " |
| | 1.55 | | 10.8 | | 23 | " |
| 34 | 6 33 | +6.740 | +69 45 7.5 | - 2.93 | 1874, Juni 21 | " |
| | 40.46 | | 7.1 | | 23 | " |
| 35 | 6 45 43.23 | +6.469 | +68 54 36.8 | - 3.96 | 1874, Juni 21 | " |
| | 42.99 | | 36.6 | | 23 | " |
| 36 | 6 50 58.70 | +6.481 | +69 4 10.8 | - 4.41 | 1874, Juni 21 | " |
| | 58.84 | | 8.2 | | 23 | " |
| 37 | 6 57 15.90 | +6.462 | +69 5 13.3 | - 4.95 | 1874, Juni 21 | " |
| | 16.05 | | 11.8 | | 23 | " |
| 38 | 6 57.47.32 | +4.993 | +56 2 | - 4.97 | 1875, Januar 26 | L |
| | 47.25 | | 81.1 | | Febr. 10 | " |
| | 47.39 | | 31.4 | | 22 | " |
| 39 | 7 4 42.50 | +6.409 | +68 57 19.9 | - 5.58 | 1874, Juni 21 | P |
| | 42.23 | | 20.6 | | 23 | " |
| 40 | 7 34 30.48 | +4.012 | +36 54 1.4 | - 8.04 | 1875, Januar 7 | L |
| | 30.57 | | 53 59.2 | | 26 | " |
| 41 | 7 39 29.92 | +3.768 | +29 53 41.9 | - 8.43 | 1875, Febr. 22 | " |
| 42 | 7 40 49.99 | +3.804 | +31 13 4.4 | - 8.54 | 1875, Januar 7 | " |
| | 50.08 | | 5.7 | | 26 | " |
| 43 | 7 48 42.96 | +4.259 | +44 58 36.2 | - 9.16 | 1875, Januar 7 | " |
| | 43.07 | | 38.5 | | 26 | " |
| 44 | 8 27 24.27 | +4.673 | +56 16 4.8 | -12.03 | 1875, Januar 7 | " |
| | 24.39 | | 5.6 | | 26 | " |
| 45 | 9 14 32.29 | +4.174 | +51 18 30.9 | -15.05 | 1875, Febr. 28 | " |
| | 32.26 | | 31.2 | | März 2 | " |
| 46 | 9 14 35.55 | +3.437 | +22 29 25.7 | -15.05 | 1874, März 25 | P |
| | 35.39 | | 24.6 | | 27 | " |
| | 35.77 | | 21.9 | | 1875, Januar 26 | L |
| 47 | 9 24 42.39 | +4.070 | +49 59 19.2 | -15.62 | 1875, Januar 26 | " |
| | 42.59 | | 16.5 | | Febr. 28 | " |
| | 42.59 | | 17.3 | | März 2 | " |
| 48 | 9 38 55.80 | +3.233 | +11 51 28.8 | -16.37 | 1873, März 25 | P |
| | 55.65 | | 28.8 | | 27 | " |
| 49 | 9 52 58.07 | +3.187 | + 9 54 51.4 | -17.05 | 1873, März 25 | " |
| | 57.99 | | 50.2 | | 27 | " |
| | 58.08 | | 49.9 | | 1875, Januar 26 | L |

| Nr. | α 1875.0 | Praec. | δ 1875.0 | Praec. | Ep. d. Beob. | Beob. |
|-----|--|----------------------|---|----------------------|-----------------|-------|
| 50 | 9 ^h 58 ^m 33 ^s .81 | +3 ^s .181 | + 9 ^h 15 ^m 35 ^s .8 | —17 ^s .30 | 1875, Januar 26 | L |
| 51 | 10 46 28.35 | +3.095 | — 3 15 9.6 | —19.03 | 1875, Januar 26 | " |
| 52 | 11 6 57.94 | +4.152 | +74 9 5.5 | —19.52 | 1874, Novbr. 3 | SP " |
| | 57.86 | | 4.0 | | 24 | " " |
| | 58.03 | | 3.5 | | 26 | " " |
| | 57.95 | | 4.1 | | Decbr. 2 | " " |
| | 57.73 | | 6.6 | | Novbr. 8 | " " |
| 53 | 13 6 4.16 | +2.796 | +35 56 22.0 | —19.22 | 1875, März 2 | " |
| | 3.90 | | 21.6 | | 14 | " |
| 54 | 13 32 37.92 | +2.651 | +38 37 5.9 | —18.44 | 1875, März 2 | " |
| | 37.72 | | 5.4 | | 14 | " |
| 55 | 13 53 9.93 | +2.530 | +40 29 12.7 | —17.66 | 1875, März 2 | " |
| | 9.95 | | 11.4 | | 14 | " |
| 56 | 14 4 52.43 | +2.461 | +41 22 9.4 | —17.15 | 1875, März 2 | " |
| | 52.32 | | 8.2 | | 14 | " |
| 57 | 14 16 32.55 | +2.409 | +41 44 54.4 | —16.59 | 1875, März 2 | " |
| | 32.36 | | 53.1 | | 14 | " |
| 58 | 14 40 46.89 | +2.269 | +42 54 27.3 | —15.32 | 1874, Mai 25 | P |
| | 46.79 | | 27.8 | | 26 | " |
| 59 | 14 59 56.91 | +2.195 | +42 48 54.0 | —14.18 | 1874, Mai 25 | " |
| | 56.87 | | 54.9 | | 26 | " |
| 60 | 15 9 58.04 | +2.150 | +43 3 41.8 | —13.55 | 1874, Mai 25 | " |
| | 57.94 | | 44.0 | | 26 | " |
| 61 | 15 21 33.19 | +2.107 | +43 6 9.1 | —12.79 | 1874, Mai 25 | " |
| | 32.96 | | 9.5 | | 26 | " |
| 62 | 16 7 39.49 | +1.982 | +42 42 44.3 | — 9.44 | 1874, Mai 25 | " |
| 63 | 16 24 32.42 | +1.964 | +42 9 27.5 | — 8.11 | 1874, Mai 25 | " |
| | 32.32 | | 28.8 | | 26 | " |
| 64 | 16 38 3.74 | +1.966 | +41 25 59.6 | — 7.02 | 1874, Mai 25 | " |
| | 3.72 | | 59.7 | | 26 | " |
| 65 | 20 14 21.34 | +2.828 | +12 17 29.7 | +11.09 | 1874, Novbr. 5 | L |
| | 21.20 | | 30.3 | | 8 | " |
| 66 | 20 39 50.35 | +2.599 | +24 43 22.8 | +12.88 | 1874, Novbr. 17 | " |
| | 50.12 | | 24.6 | | 21 | " |
| | 49.96 | | 26.1 | | 26 | " |
| 67 | 23 41 29.79 | +3.057 | + 7 18 37.0 | +19.99 | 1873, Octbr. 29 | P |
| | 29.68 | | 35.3 | | Decbr. 8 | " |
| 68 | 23 49 14.22 | +3.063 | + 7 31 42.3 | +20.03 | 1873, Octbr. 29 | " |

Positionen einiger bei den Beobachtungen der Lachesis, bei ihrer Erscheinung im Jahre 1872, benutzter Vergleichsterne, am Hamburger Meridiankreise bestimmt und auf das mittlere Aequinox 1875.0 reducirt.

| | | | | | | |
|---|-------------|--------|-------------|--------|---------------|---|
| 1 | 11 49 2.92 | +3.066 | — 4 26 21.5 | —20.03 | 1874, März 3 | P |
| | 2.51 | | 20.8 | | 12 | " |
| | 2.91 | | 21.0 | | 1873, März 28 | " |
| | 2.87 | | | | 27 | " |
| 2 | 11 50 37.95 | +3.067 | — 4 5 13.9 | —20.03 | 1874, März 10 | " |
| | 37.83 | | 14.8 | | 23 | " |
| | 37.67 | | 15.8 | | 26 | " |
| | 37.82 | | | | April 23 | " |
| | 37.77 | | | | 26 | " |

| Nr. | α 1875.0 | Praec. | δ 1875.0 | Praec. | Ep. d. Beob. | Beob. |
|-----|---|----------------------|---------------------------|---------|----------------|-------|
| 3 | 11 ^h 52 ^m 38 ^s .19 | +3 ^s .068 | — 4 ^h 4' 30" 9 | —20" 04 | 1874, Febr. 21 | P |
| | 38.30 | | 30.4 | | März 8 | " |
| 4 | 11 54 4.42 | +3.069 | — 3 50 53.8 | —20.05 | 1874, April 4 | " |
| | 4.40 | | | | 23 | " |
| | 4.20 | | | | 26 | " |
| 5 | 11 54 14.43 | +3.069 | — 4 25 25.4 | —20.05 | 1874, März 12 | " |
| 6 | 11 56 35.05 | +3.069 | — 4 34 11.9 | —20.05 | 1874, März 23 | " |
| | 34.99 | | 12.8 | | April 23 | " |
| | 34.86 | | 11.8 | | 25 | " |
| 7 | 11 57 11.61 | +3.069 | — 4 46 59.4 | —20.05 | 1874, März 2 | " |
| | 11.86 | | 61.9 | | 3 | " |
| | 11.85 | | | | 1873, März 28 | " |
| 8 | 11 59 10.87 | +3.070 | — 5 8 59.0 | —20.05 | 1874, März 10 | " |
| | 10.98 | | 59.4 | | 12 | " |
| 9 | 11 59 18.28 | +3.071 | — 4 59 32.6 | —20.05 | 1874, März 8 | " |
| | 18.36 | | 32.6 | | April 14 | " |
| | 18.33 | | | | 1873, März 28 | " |
| | 18.30 | | 37.6 | | 27 | " |

Sämmtliche obige, am Meridiankreise gemachten Bestimmungen beruhen auf den von der Redaction des Berliner Astronomischen Jahrbuchs herausgegebenen Positionen der in der Vierteljahrsschrift der Astronomischen Gesellschaft, Heft 4 1869, publicirten Sterne.

R als Beobachter bedeutet Rümker, P Herr Dr. Pechüle, L Herr A. Lindstedt.

Die Reductionen sind sämmtlich von den Herren Dr. Pechüle und Lindstedt ausgeführt.

Beobachtung der Sonnenfinsterniss vom 25. Mai 1873.

Eintritt 1873, Mai 25 20^h 30^m 2^s.2 Mittlere Hamburger Zeit Rümker, Beobachter.

Sternwarte Hamburg, Juni 5, 1875.

Georg Rümker.

Death of Professor Joseph Winlock, Director of Harvard College Observatory.

Professor Joseph Winlock, Director of Harvard College Observatory and Phillips Professor of Astronomy, died suddenly on the morning of June 11th 1875.

Professor Winlock was born in Shelby County, Kentucky, in 1826. Graduating at Shelby College in 1845, he was immediately appointed Professor of Mathematics and Astronomy in that institution. He held this position till 1852, when he removed to Cambridge, Massachusetts, and took part in the computations of the American Ephemeris and Nautical Almanac, at that time under the superintendence of Admiral C. H. Davis. In 1857 he was appointed Professor of Mathematics in the United States Navy, and for several months afterwards, was Assistant in the Naval Observatory at Washington. He was afterwards made Superintendent of the American Ephemeris. In 1859 he took charge of the Mathematical Department of the Naval Academy at Annapolis, Maryland.

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He held this position till the removal of the Academy to Newport, Rhode Island, at the outbreak of the war in 1861, when he was again appointed Superintendent of the American Ephemeris.

He continued to perform the duties of this office till his appointment in 1865, as Director of Harvard College Observatory.

In August 1874, he was appointed by the Secretary of the Navy, Chairman of the Commission established under the act of Congress. „To authorize inquiries into the causes of Steam-boiler explosions.“ He entered upon the study of this special problem with great earnestness, and his preparations were so far completed, that the preliminary experiments were to have been made near the close of the present month.

Of the results of the labours of Professor Winlock, as Director of the Observatory, it is yet too early to speak with a just appreciation. He lived to witness